

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/06843

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B21C23/14 B21C25/08 B22F3/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B21C B22F B29C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 422 994 A (TAYLOR GEORGE F) 24 June 1947 (1947-06-24) column 1, line 49 -column 2, line 10; figures	1,7-9
A	US 6 248 277 B1 (FRIEDRICHS KONRAD) 19 June 2001 (2001-06-19) column 5, line 46 -column 6, line 8 column 6, line 50 - line 61 column 7, line 4 - line 16 column 7, line 37 - line 49 column 8, line 5 - line 9; figures	1-7
A	US 5 780 063 A (FRIEDRICHS ARNO) 14 July 1998 (1998-07-14) claim 1; figures	1,10,11



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

16 September 2003

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 396 676 A (MARK HASTEN ET AL) 13 August 1968 (1968-08-13) column 3, line 20 - line 54; figures -----	1-4
A	PATENT ABSTRACTS OF JAPAN vol. 013, no. 418 (M-871), 18 September 1989 (1989-09-18) - & JP 01 156405 A (SUMITOMO ELECTRIC IND LTD; OTHERS: 01), 20 June 1989 (1989-06-20) abstract; figure 4 -----	1

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Information on patent family members

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